3-22-89

233359
RECORD NO.

128992
SHAUGHNESSY NO.

REVIEW NO.

EEB REVIEW

DATE: IN 10-20-88 OUT: 3-22-89

FILE OR REG. NO. 1812-GET

PETITION OR EXP. NO.

DATE OF SUBMISSION 10-3-88

DATE RECEIVED BY HED 10-18-88

RD REQUESTED COMPLETION DATE 1-26-89

EEB ESTIMATED COMPLETION DATE 1-26-89

RD ACTION CODE/TYPE OF REVIEW 116

TYPE PRODUCT(S): I, D, H, F, N, R, S Insecticide

DATE ACCESSION NO (S). 408475-01, 02

PRODUCT MANAGER NO. P. Hutton (17)

PRODUCT NAME (S) GX-071

COMPANY NAME Griffin Corporation

SUBMISSION PURPOSE Submission of aquatic toxicity data to support registration

SHAUGHNESSEY NO.	CHEMICAL AND FORMULATION	% A.I.
128992	GX-071	99.0

1

100.0 Pesticide Name: GX-071

100.1 Submission Purpose:

Submission of aquatic toxicity data to support registration of indoor only cockroach use.

101.0 Chemical and Physical Properties:

101.1 Common Name: GX-071

102.0 Toxicological Properties:

Acute Oral LD_{50} for Bobwhite Quail;
Eight-Day Dietary LC_{50} for Bobwhite Quail;
Eight-Day Dietary LC_{50} for Mallard Duck;
96-Hour LC_{50} for Rainbow Trout; and
48-Hour LC_{50} for Daphnia magna

103.0 Conclusions:

A. Bobwhite Quail (LD_{50})

This study appears to indicate GX-071 is moderately toxic to bobwhite quail with an LD^{50} of 474 mg/kg. This study is classified as supplemental because the two highest doses produced only 40% mortality; higher doses, producing > 50 % mortality, are required to better bracket the LD_{50} value.

B. Bobwhite Quail (LC_{50})

This study appears to indicate GX-071 is highly toxic to bobwhite quail with an LC_{50} of 461 ppm. This study is classified as supplemental until it can be shown (e.g., by residue analyses data) that the diet mixing technique results in nominal and actual concentrations that are similar.

C. Mallard Duck (LC_{50})

This study indicates GX-071 is highly toxic to mallard duck with an LC_{50} of 165 ppm. This study does fulfill the requirement in support of registration for avian dietary LC_{50} study.

D. Rainbow Trout (LC_{50})

This study appears to indicate that GX-071 is slightly toxic to rainbow trout with a 0-hour LC_{50} > 10 ppm nominal (>8.5 ppm measured concentration)and a 96-hour LC_{50} > 10 ppm nominal (>0.21 ppm measured) concentration. This study is classified as supplemental because GX-071 precipitated out of solution and (even though concentrations were measured) a dose response was not obtained.

E. Daphnia magna (LC_{50}

This study appears to indicate that GX-071 is moderately toxic to Daphnia magna with a 48-hour EC_{50} > 10 ppm nominal (> 2 ppm measured) concentration. This study is classified as supplemental because an adequate dose response was not achieved. Further, it appears GX-071 may have precipitated out of solution.

Relative to the above, EEB concludes:

1. The mallard duck LC_{50} study is the only acceptable study submitted and supports the proposed indoor use;

2. The bobwhite quail LD_{50}, bobwhite quail LC_{50}, rainbow trout LC_{50}, and Daphnia magna EC_{50} studies are supplemental and cannot be used to support any outdoor use patterns. EEB has determined, however, that these studies support the proposed indoor cockroach use.

3. The bobwhite quail LC_{50} study can be upgraded to acceptable (core study) if the registrant can show (e.g., residue analyses data) that the diet mixing technique results in nominal and actual concentrations that are similar.

4. To support any future outdoor use patterns, the studies listed in (2) would have to be rerun (except for the bobwhite quail LC_{50} study if it is upgraded). Further, at a minimum, a warmwater fish LC_{50} study would also be required, (And note that all the aquatic studies must use flow-through conditions, an appropriate solvent, and measure levels of GX-071 in the water column).

In closing, no further data are required to support the proposed indoor only cockroach use. If the registrant wishes to improve the available data base, then points (2) through (4) above can be addressed.

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